

## Product Features

- Heavy duty concentric tube type design
- Continuous loop powered 4-20 mA operation
- Microprocessor Based
- Accuracy 1 % of span for constant dielectric of material
- Non-interactive zero and span calibration
- Calibration accomplished with 4 push buttons
- NEMA rated aluminum, stainless, PVC and explosion proof housings available
- Standard fitting 1-1/2" NPT, flange and special fittings available

## Description

INTEMPCO LTX02 series 2-wire level transmitters are highly reliable microprocessor based sensors designed to measure tank levels of liquids in metallic as well as non-metallic tanks. LTX02 sensors measure the change in capacitance that occurs as the tank level changes and outputs a standard loop-powered 4-20mA signal. After calibration any change in level is recognized and converted to an analog 4-20mA signal. LTX02 sensors use very high frequency and very low amplitude sensing circuitry to greatly minimize the effects of coating on the sensing probe.

Level measurement of water based liquids in non-metallic tanks, using a teflon coated probe is an ideal application for the LTX02. Also, to obtain a linear output in an irregularly shaped tank, such as a cone, use a concentric tube LTX02.

The LTX02 includes a standard 4-20mA loop powered LTX transmitter, a rugged customer selected enclosure, a PFA coated probe, concentric tube for ranges of up to 20 feet and a fitting. The LTX02 is designed for tanks which have fitting connections of 1" NPT or larger. Call factory for smaller tank openings or special applications.

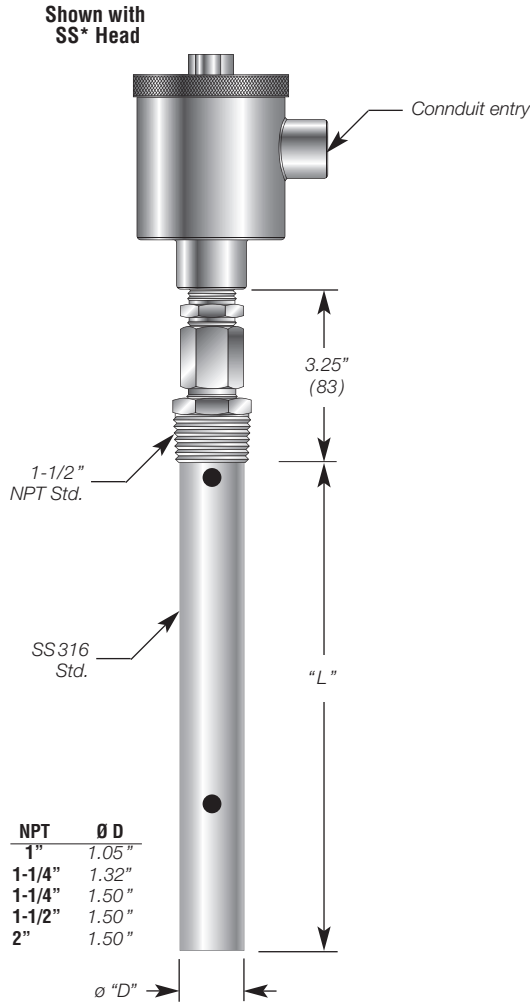
## Application / Process Notes

- Water and water-based liquids metallic and non-metallic tanks
- Jacketed probes required for conductive media
- Organic Acids
- Oils and fuels in metallic and non-metallic tanks
- Use bare probes with non-conductive media
- Use cable probes where top side access is limited
- On-site calibration required
- Not recommended where material dielectric changes

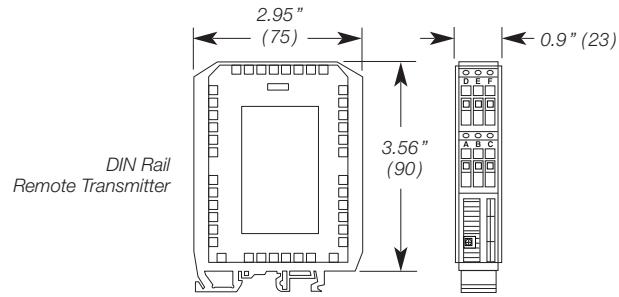


# LTX02 LEVEL SENSORS

Continuous Capacitance Level Transmitter  
4-20 mA, Loop Powered



NPT	Ø D
1"	1.05"
1-1/4"	1.32"
1-1/2"	1.50"
1-1/2"	1.50"
2"	1.50"



## Electrical Specifications

- Supply Voltage :** 12 VDC - 36 VDC
- Output :** 4-20 mA, loop powered
- Maximum Loop Res.:** [Vs - 10] / 0.02 (i.e. 700Ω @ 24 VDC)
- Calibration :** Via 4 push-button switches  
non-interactive settings
- Capacitance Range :** 10 pF to 10000 pF
- Accuracy :** ± 1% of full span (constant dielectric)
- Repeatability :** ± 0.1 % of span
- Damping Adjust :** 0-30 sec.
- Ambient Temperature :** -40 to 70 °C (-40 to 158 °F)

## Mechanical Specifications

- Enclosures**
  - AH2 :** Aluminum, lift cover type, NEMA 4
  - SS\* :** Machined Stainless 316, NEMA 4X
  - CS3 :** Machined Stainless 316, NEMA 4X
  - XD3 :** Class I, Div 1 Gps. B,C & D, Class II, III  
Div 1 Gps. E,F & G, NEMA TYPE 4X (IP68)
  - PV2 :** PVC, 1/2" conduit, NEMA 4X
  - PV9 :** PVC, Pg9 Gland, NEMA 4X
- Mounting Thread :** 3/4" to 2" NPT standard, others available
- Process Temperature:** 200 °C max (392 °F)-consult factory for higher temperatures
- Pressure Limits:**
  - 500 psi (34 bar) @ 25 °C (77 °F)
  - 250 psi (17 bar) @ 150 °C (302 °F)
  - 14.5 psi (1 bar) @ 200 °C (392 °F)
- Probe Mat'l :** PFA jacketed, or bare SS316
- Tube Mat'l :** SS316 std., others available - consult factory

## Custom Builder

MODEL      1      2      3      4      5

**LTX02** -  -  -  -  -

BOX1 CODE	Electronic Module
<b>B3</b>	4-20 mA, 2-wire output Module installed in enclosure
<b>DN</b>	4-20 mA, 2-wire output Remote mounted DIN Rail Module

BOX3 CODE	Mounting Fitting
<b>P**</b>	NPT male, 1.5" std.
<b>PH**</b>	NPT male, 1.5" std., high pressure
<b>F**</b>	Flange SS316, RF 150 lb.

BOX4 CODE	Probe Material
<b>A</b>	PFA jacketed solid probe
<b>B</b>	SS316 Bare solid probe

BOX2 CODE	Enclosure
<b>XD3</b>	Aluminum Explosion Proof
<b>AH2</b>	Aluminum Flip-Cover
<b>SS*</b>	Machined Stainless Steel
<b>CS3</b>	Cast Stainless Steel
<b>PV9</b>	PVC (Pg9 Gland)
<b>PV2</b>	PVC with 1/2" conduit

** Fittings	** Flanges
<b>44</b> 1" NPT	<b>20</b> 2" Flange
<b>54</b> 1-1/4" NPT	<b>25</b> 2-1/2" Flange
<b>64</b> 1-1/2" NPT	<b>30</b> 3" Flange
<b>84</b> 2" NPT	<b>40</b> 4" Flange
	<b>50</b> 5" Flange
	<b>60</b> 6" Flange

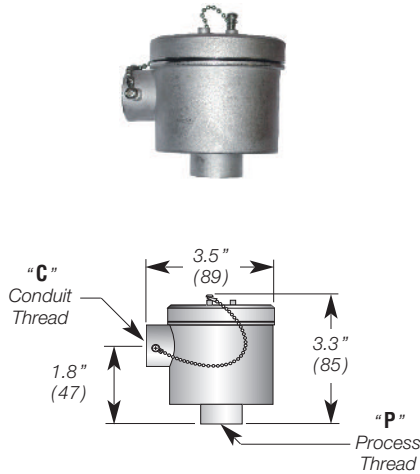
BOX5 CODE	Probe Length "L"
<input type="text"/>	In inches (20 ft max.) Ex.: <b>065</b> = 65" long

**\*2** = 1/2" NPT Conduit  
**\*3** = 3/4" NPT Conduit  
**Note :** See **Level Accessories Section** for Enclosure specifications and dimensions

**Note :** \*2= 1/2" NPT Conduit  
\*3= 3/4" NPT Conduit

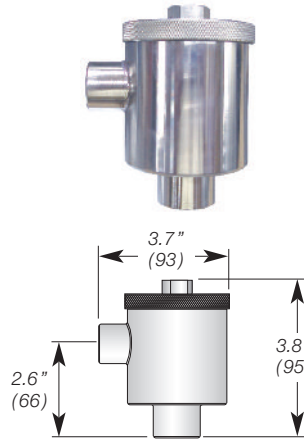
**C**=Conduit Thread  
**P**=Process Thread

### Stainless Steel Cast Type CS3



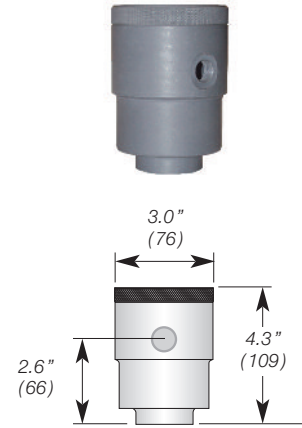
- Stainless 316 Cast Screw Cover Head
- General Purpose
- 3/4" NPT Conduit
- 1/2" or 3/4" NPT Process
- Indoor/Outdoor NEMA Type 4X
- Weight 26 oz (730 gm)
- Std. 33mm, 40mm & 46mm C-C Mounting (adapter plate)
- Max. space for transmitter 56mm x 33mm (2.18" x 1.3")

### Stainless Steel Type SS\*



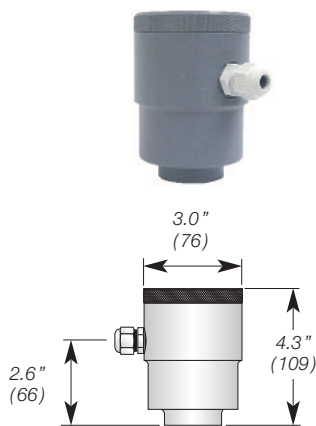
- Stainless Steel Machined Screw Cover Head
- General Purpose
- 1/2" or 3/4" NPT Conduit
- 1/2" or 3/4" NPT Process
- Indoor/Outdoor NEMA Type 4X
- Weight 42 oz (1200 gm)
- Std. 33mm, 40mm & 46mm C-C Mounting (adapter plate)
- Max. space for transmitter 56mm x 33mm (2.18" x 1.3")

### PVC Type PV2



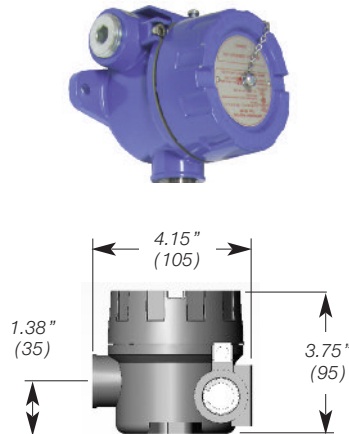
- PVC Machined Head
- General Purpose
- 1/2" NPT Conduit
- 1/2" or 3/4" NPT Process
- Indoor/Outdoor NEMA Type 4X
- Weight 16 oz (450 gm)
- Std. 33mm, 40mm C-C Mounting
- Max. space for transmitter 50mm x 33mm (2" x 1.3")

### PVC Type PV9



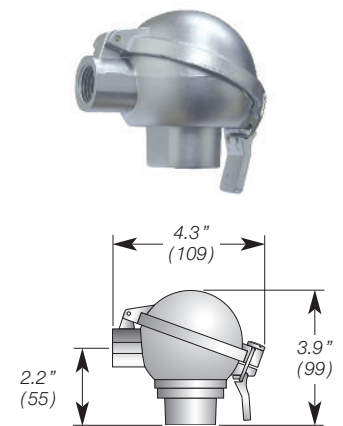
- PVC Machined Head
- General Purpose
- Pg9 or Pg11 Gland Conduit
- 1/2" or 3/4" NPT Process
- Indoor/Outdoor NEMA Type 4X
- Weight 16 oz (450 gm)
- Std. 33mm, 40mm C-C Mounting
- Max. space for transmitter 50mm x 33mm (2" x 1.3")

### Aluminum Explosion Proof Type XD\*



- Aluminum Sand Cast Head
- FM/CSA Explosion Proof  
CL. I, Dic. 1, Gps.A, B,C&D, CL II, Div1, Gps. E,F&G CL.III; Ex d IIC & IP66
- 1/2" or 3/4" NPT Ports
- Indoor/Outdoor NEMA Type 4X & IP66
- Weight 2.2 lbs (1000 gr.)
- Std. 33mm, 40mm & 46mm C-C Mounting (adapter plate)
- Max. space for transmitter 76mm x 50mm (3" x 2")

### Aluminum Type AH2



- Aluminum Die Cast Flip Cover Head
- General Purpose
- 1/2" NPT Conduit Only
- 1/2" or 3/4" NPT Process Only
- Indoor/Outdoor NEMA Type 4
- Weight 10 oz (280 gm)
- Std. 46mm C-C Mounting
- Max. space for transmitter 58mm x 20mm (2.25" x .75")